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| 09/658,432 | 09/08/2000 | Lila Madour | 1000-0191 | 2961 |

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| EXAMINER | |
|---|---|
| LEE, CHI HO A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2663 | 8 |

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/658,432 | MADOUR ET AL. | |
| | Examiner | Art Unit | |
| | Andrew Lee | 2663 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *08 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4 and 5* is/are allowed.

6)☒ Claim(s) *1-3,6-9 and 11* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshino U.S. Patent Number 6,603,763.

Re Claim 1, fig. 2 teaches the Internet Connection Device 11 (PCF) selecting a particular Packet Switch (Packet Data Service Node) for providing a session between a host in Internet 10 and a packet mobile device registered with a particular Packet switch (See col. 4, lines 5-56) wherein the selecting of the packet switch is based on the private IP address. Within device 11 comprises a memory 106 (See fig. 4B) which associates the private IP group with a Packet Switching Device (associated list of the plurality of PDSNs in the network), wherein when the Incoming Packet Delivery 105 accesses 106 to consistently select the particular Packet Switch associated with the private IP address. Within each Packet Switch (See fig. 3) includes a Private IP address-ID number correspondence Memory (See fig. 4C) that associated the registered mobile ID with the assigned Private IP address (a list of identifiers for MNs and an associated list of the plurality of PSDNs in the network). These tables in both 11 and Packet Switch are utilized for selecting the particular Packet switch to host the data session for the MN. Koshino fails to explicitly teach that fig. 4C table is incorporated

into a static lookup table in the Internet Connection Device 11. However, one skilled in the art would have been motivated to incorporate the lookup table fig. 4C into the Internet Connection Device 11 to centralized the processing at the 11 so as to minimize processing at the plurality of the packet switches. Hence, by moving the table (Fig. 4c) into the device 11, the device 11 can efficiently transport packets directed to the mobile by minimizing the signaling between device 11 and the plurality of packet switches. For instance, once registration of the mobile is directed and completed by the Internet Connection Device 11, IP packets from the Internet can be efficiently directed to the plurality of packet switch by associating the not the Global IP with Private IP address but also by associating the private IP address the particular Packet Switch in which the Mobile unit has registered with. Therefore, it would have been obvious to one ordinary skilled to incorporate Fig. 4c into the lookup tables at the switching core 11.

Re Claim 2, refer to Claim 1, wherein Kishino fails to explicitly teach a plurality of Internet Connection Device 11. However, one skilled in the art would have been motivated to implement plurality of Internet Connection Devices for expanded coverage. Hence, when plurality of the Internet Connection Devices are implemented, one skilled in the art would have been motivated to store the lookup table in every PFC in the network so translation between the Global IP address associated with the Private IP address can be unique whereby to prevent duplicate transmission and to facilitate security.

3. Claims 3, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshino U.S. Patent Number 6,603,763 in view of Lim U.S. Patent Number 6,404,754.

Re Claim 3, in Koshino (See claim 2), it would have been obvious that each PFC maintain plurality of tables to used for selecting a particular Packet switch (selecting PDSN) and identifying the location of the mobile station based on the Mobile-ID and the assigned private IP address (utilizing the lookup table; connecting the MN to the selected PDSN).

Kishino fails to explicitly teach "a dormant handoff procedure...including the step of passing the identifier for the MN to the target PFC".

However, Lim teaches a dormant handoff procedure that includes the mobile station transmits a re-originating call to the new RNC (target PFC) that includes passing of the MN (See fig. 4B also Col. 8, line3s 18-46). In response, using the received information, the New RNC requests to the previous RNC to release the packet SVC and thereafter, the new RNC transmits an answer to the mobile unit to permit packet data transmission. One skilled in the art would have been motivated to "pass" the MN to the new PFC in order to release the resources at the previous RNC to converse bandwidth. Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Lim into the teaching of Kishino.

Re Claims 6, 7, refer to Claims 1 & 2, wherein information IP packets from the Internet is received at a particular Internet Connection Device 11 (a first PCF) to host a session with the MN; device 11 associates the global IP address with the private IP address (IP address of the particular PSDN) to select the particular Packet switch associated with the registered MN; the mobile station functions to transmit a packet having the received private IP address as the source address to the packet switching

device through a base station (See col. 6, lines 38-43). Kishino fails to explicitly teach "sending an information message from the first PFC to the MN via a Base Station Controller (BSC). Lim teaches a Base station controller for routing calls to the base stations. One skilled in the art would have been motivated to include the base station controller in wireless network implementation to facilitate expanded coverage, wherein including the base station controller, more base station can be implemented. Therefore, it would have been obvious to one ordinary skilled include the base station controller in the wireless network implementation of fig. 1.

Kishino fails to explicitly teach "passing the IP address of the particular PDSN identifier from the MN to any other target PFC". During mobile registration after the mobile has roamed to a new registration area, the mobile transmits various information to the "target PFC" and this information is updated in the Location Register 12. It is inherent that the MS-ID is transmitted (See col. 4, lines 48-58). It would have been obvious that the registration message to include the "the particular PDSN identifier". Since, the "assigned Private IP address" uniquely identified the particular location information, the MS-ID information associated with the previously assigned private IP address can be used to identified that to mobile unit to route the received data packet. Thereafter, the Packet switch that receives the data packet can retrieve that location information comprising of the MS-ID and the "assigned Private IP address". Since, each group of Private IP addresses are uniquely associated with the a particular packet switch, the retrieve location information from the HLR 12 can uniquely identify whether the roamed MS has previous been registered with the previous packet switch in order to

determining the routing destination of the next packet switch. Hence, one skilled in the art would have been motivated to retrieve location information that comprises not only the MS-ID but also the "assigned private IP address" to determine whether the roam MS has previously establish a data session with the previous packet switch to enable routing of the received packet to the next packet switch.

Re Claim 8, refer to Claim 1, wherein the fig. 1, teaches that each group of private IP address are associated different registration AREAs.

4. Claims 9 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshino U.S. Patent Number 6,603,763 in view of Chang et al U.S. Patent Number 6,338,078.

Re Claim 9 and 11, refer to Claim 1, Kishinio teaches in figs 4B and 4C, the Mobile station ID associated with the Private IP address wherein the group of private IP addresses are associated with Packet Switching Device (a particular PDSN).

Kishino fails to explicitly teach "a hash function that associates the identifier for the MN with the particular PDSN utilizing the lookup table".

However Chang teaches that a hashing function based on the source MAC address, source IP address ensures that the sequence of packets within a given communication session will be preserved (See Abstract). The Mac address and IP address are analogous to the MS-ID and Private IP address of Kishino. One skilled in the art would have been motivated by Chang to include the hashing function into Kishino to ensure the sequence of packets are preserved during the data session.

Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Chang into the teaching of Kishino.

***Allowable Subject Matter***

5. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In combination with Claims 9 and 10, prior art fails to teach the "a cache memory that stores the identifier for the MN and an IP address for the particular PDSN for a predetermined period of time after handing off the MN to another PCF.

6. Claims 4 and 5 are allowed

7. The indicated allowability of claims 6-9 and 11 are withdrawn in view of the newly discovered reference(s) to U.S. Patent Number 6,603,763 in view of . Rejections based on the newly cited reference(s) above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

AL
3/15/04

ANDY LEE
PATENT EXAMINER